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(12) # EUROPEAN PATENT APPLICATION

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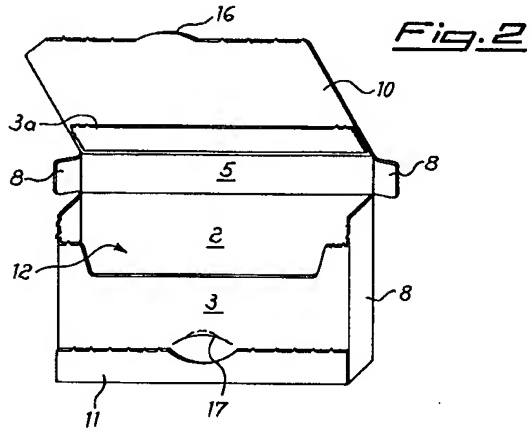
(54) **Folding box provided with a recloseable opening.**

(57) A box or holder to dispense products contained therein, is formed by a single die-cut element, which is folded and glued to form the body of a box which is re-sealable after being filled with its contents; after it has been opened to remove the contents, the assembled box presents an opening (12) which extends to one or more sides of the box and is re-sealable by means of a flap (10) which is an extension of one side of the box and which can be folded and attached to the box itself.

Fig.2



EP 0 615 913 A1

The present invention relates to a box or holder to contain and dispense products.

In particular, the present invention relates to a box to contain and dispense medicines, cosmetics or similar products which are already contained in some form of primary packaging e.g. in phials, ampules, blister-packs or similar containers.

In accordance with a known technique, such products are generally put on sale inside boxes or holders also containing, in the case of medicines, an information leaflet giving the dose and other information.

The European Patent Application No. A-0430013, filed on 19.11.1990 with Italian priority of 30.11.1989, in the name of Grafiche Eikon, describes a box or holder for medicines or similar products, without information leaflets and in which one side of the box extends as a folding flap which can be non-permanently attached to the outside of one of the sides of the same box. The information from the information leaflet is reproduced on said movable flap of the box.

The presently known boxes all have a problem of interior access, e.g. when the contents have to be checked for integrity and completeness at the moment of sale. Similarly, all the contents, ampules in their racks or blister-packs, must be removed each time a single dose has to be removed to be administered or taken.

An object of the present invention is to overcome the above mentioned problems by means of a box or holder with improved accessibility.

This object is achieved by the present invention, which relates to a box or holder of a tape formed from a single die-cut element, which is folded and glued to form the body of the box which can be re-sealed after the contents have been introduced, characterized in that having at least a part of at least one side of the open formed box is absent and constitutes an opening giving access to the interior of the formed box; said opening being re-sealable by at least one closure flap extending from at least one side of said box and being foldable and attachable to said box.

According to a preferred embodiment of the invention, a part of one of the sides of the body of the box is attached to the closure flap and a line of perforations allows it to be detached from the body of the box when the closure flap is raised to open the box. The removal of said part completes the formation of the opening giving access to the interior of the box.

According to another aspect of the invention, the closure flap is temporarily attached to the body of the box by gluing an extremity of the flap defined by a line of preset detaching perforations in the flap for the detachment of the same flap from the body of the box.

The box according to the present invention offers obvious advantages on the present state of the art; in addition to an increased accessibility to the interior of the box, the presence of the tear-off glued extremity of the closure flap constitutes an anti-tamper device without impeding closure of the box once it has been opened.

Furthermore, the closure flap can be printed with information relating to the product e.g. the ingredients in the case of sweets or food products, or the contents of the information leaflet, thus obviating the need for the latter, in the case of pharmaceutical products.

The invention will now be described in more detail, with reference to the attached illustrative but non-limitative drawings,in which:

- figs. 1 and 2 are respectively a plan view of a die-cut element, and a perspective view of a box according to the invention.
- figs. 3 and 4 are views, corresponding to figs. 1 and 2, of a second embodiment of the invention.
- figs. 5 - 7 are plan and perspective views of a third embodiment of the invention.
- figs 8 and 9 are respectively plan and perspective views of a further embodiment of the invention.

With reference first of all to figs.1 and 2, the box according to the invention consists substantially of a die-cut element, preferably in cardboard, of a type normally used as commercial container for medical, cosmetic and similar products usually already in a primary pack e.g. a blister pack (for pills, tablets and similar products) or phials.

Naturally, it is not intended that protection be limited to only those products mentioned above. Furthermore, it should be noted that by the term "die-cut element" is intended any element obtained by press die-cutting, regardless of the material in which it is made, as well as similar shapes obtained by other techniques such as stamping.

The die-cut element 1 of fig.1 presents a plurality of sides 2 -6 which together form the body of the box assembled in an already known manner. In particular there are two longitudinal sides 2 and 3, and two transverse sides 4 and 5; the remaining side 6 is attached by glue to the side 3 to form the body of the box, which is re-sealable by gluing wings 8 together, or by tucking in tongues 9 shown by broken lines in fig. 1 and the wings 8.

As it can be seen, a part 7 of the side 3 has been cut out and forms an opening to the interior when the box is assembled.

Said opening can be re-sealed by means of a flap 10 which extends from side 6 and can be attached to side 3 of the box.

The opening 12, which is formed when the box is assembled and opened, could exactly corre-

spond to the cut-out portion 7 (extending also to both sides of the body of the box - figs. 3 and 4) or could be formed by the removal of part 7 and the removal of a further part of one or more sides of the body of the box. This latter solution is shown in the embodiment of figs 1 and 2.

In the case of figs. 1 and 2, the flap 10 is an extension to, and an integral part of side 6, i.e. there are no separating fold-lines; side 6 and flap 10 form a single whole. As described above, side 6 is attached to the remaining end side 3 of the die-cut element 1 to form the body of the box; in particular, side 6 is glued to the outer area 3a of side 3. Said area 3a is defined with respect to the rest of side 3 by perforation lines 13 and in part by the cut-out portion 7, such as to cause area 3a to tear away from the remaining side 3 when the box is opened (Fig.2) thus forming a larger opening 12 than the cut-out 7 alone.

According to another embodiment of the invention, not shown, area 3a of side 3 could include the area corresponding to the cut-out 7. In other words, there would not be any cut-out 7 in said embodiment; the opening 12 would be formed by area 3a being torn away when the box is opened.

The embodiment shown in figs. 3 and 4 illustrates, as suggested above, a die-cut element and box where the opening 12 corresponds to the cut-out 7 and extends over the two adjacent sides 5 and 2. As a result, the closure flap extends over said two sides with two parts 10a and 10b. In this embodiment, side 6 is attached to side 3 to form the body of the box and is not detached when the box is opened.

The embodiment shown in figs. 5 - 7 is similar to that of figs 1 and 2, with the difference that in this case the closure flap is composed of three elements 10a, 10b and 10c.

The first of these, 10a, corresponds to the flap 10 integral with side 6 described in fig.1. Since the closure flap extends to three sides of the body of the box, the closure elements 11 and 15 are attached to side 2 of the box instead of side 3 as in fig. 2.

Independent of the shape of the opening 12 or the closure flap of the same, the closure flap preferably presents means of attachment which can removably attach it to the underlying side of the body of the box up to the box opening.

According to the preferred embodiment shown in figs. 1 - 4, said means consist of a plurality of glue points or glue zone(s) 14, which attach the outer area 11 of the closure flap to the underlying side - side 2 in fig. 3 and side 3 in fig. 2 - of the box. Said glue zone is defined by a line of perforations 15 which allows the closure flap 10 to be torn away from its outer edge 11 which remains glued to the body of the box.

The remaining part of the closure flap presents further means of attachment so that it can be attached in a non-permanent way to the body of the box. Said means consist e.g. of portions of a pressure adhesive of the replaceable type or, as shown in the figure, of a slot 17 cut into the body of the box, on side 2 or 3, preferably surmounted by a cutaway to facilitate its use, and a projecting tab 16 on the outer edge of the closure flap.

Furthermore, to facilitate the tearing of the closure flap from the fixed part 11, the corners of the same are preferably notched at 16a.

Figs. 8 and 9 show a further modification of the invention, where the closure flap 18 extends sideways from side 5 of the die-cut element i.e. in a direction substantially perpendicular to that of the other figures.

The flap 18 is provided with an area 19 which is permanently attached to the area 19a of side 3 when the body of the box is formed. In this operation side 5 is attached to side 6 (back) to form the box which, once filled with its contents, is definitively closed by gluing the wings 8. The box is opened by detaching the flap 18 and its related wing 8 from the area 19 and side 5 by means of tearing perforations 20, so to allow a rotation of said flap 18 and related wing 8 in the direction indicated by the arrow F.

Temporary closure of the box is achieved by inserting the projecting part of flap 18 inside the opening 12.

If desired, the internal part of the closure flap, regardless of how it is produced, could carry instructions about the use of the product which could replace or complement any information leaflet in the pack.

Claims

1. A box or holder of the type consisting of a single die-cut element folded and glued to form the body of a box which can be closed after the contents have been inserted, characterized in that at least part of at least one of the made-up open box is cut out and removed and constitutes an opening giving access to the interior part of the box formed box, said access opening being able to be covered by at least one closure flap which extends from at least one side of said box and is foldable and attachable to said box.

2. A box according to Claim 1, characterized in that said opening extends to two adjacent sides of the box and said external closure flap is formed by at least two folding elements.

3. A box according to Claim 1, characterized in that said opening is formed in whole or in part by the removal of a part of the side(s) defined by pre-set rupture lines, said part being permanently attached to said closure flap to effect its detachment from the remaining part of the side(s) when said closure flap is opened.

4. A box according to Claim 3, characterized in that said access opening is formed by a first part being cut out from the die-cut element on one side of the body of the box adjacent to a second part of said side, said second part being attached to said closure flap and being defined with respect to the remaining part of said side, by said first die-cut part as well as by pre-set rupture lines to effect its detachment together with said closure flap when the same is opened.

5. A box according to Claim 4, characterized in that said closure flap is an extension of one of the terminal sides of the die-cut element, said side being superimposed and fixed to a part of the opposite side of said die-cut element forming said body of the box, in correspondence to said second detachable section.

6. A box according to Claim 5, characterized in that said closure flap consists of two further parts and extends over three sides of said body of the box.

7. A box according to Claim 1, characterized in that said cut-out part is removed from a first side of said die-cut element and said closure flap is a lateral extension of the side opposite to said first side, said closure flap consisting of at least one part permanently attached to the body of the box and detachable with respect to said closure flap by means of pre-set rupture lines.

8. A box according to one of the preceding Claims, characterized in that said closure flap is non-permanently attached by attachment means to the underlying side of the body of the box.

9. A box according to Claim 8, characterized in that said attachment means comprise glue points between the terminal edge of the said closure flap and the underlying side of the body of the box, a pre-set rupture line defining the extremity of the gluing of the flap with respect to the remaining flap for its detachment from said flap on the opening of the box, as well as means for non-permanently attaching said non-glued flap extremity to the body of the box.

10. A box according to Claim 9, characterized in that said means of non permanent attachment of said closure flap comprise a slit cut into said body of the box near said glued extremity of the closure flap.

11. A box according to one of Claims 4 -10, characterized in that said closure flap non-permanently attached by means of strips of pressure adhesive of a re-sealable type .

12. A box according to one of Claims 9 to 11, characterized in that said closure flap has one or more notches in correspondence to said pre-set rupture line to facilitate gripping the flap.

Fig.1

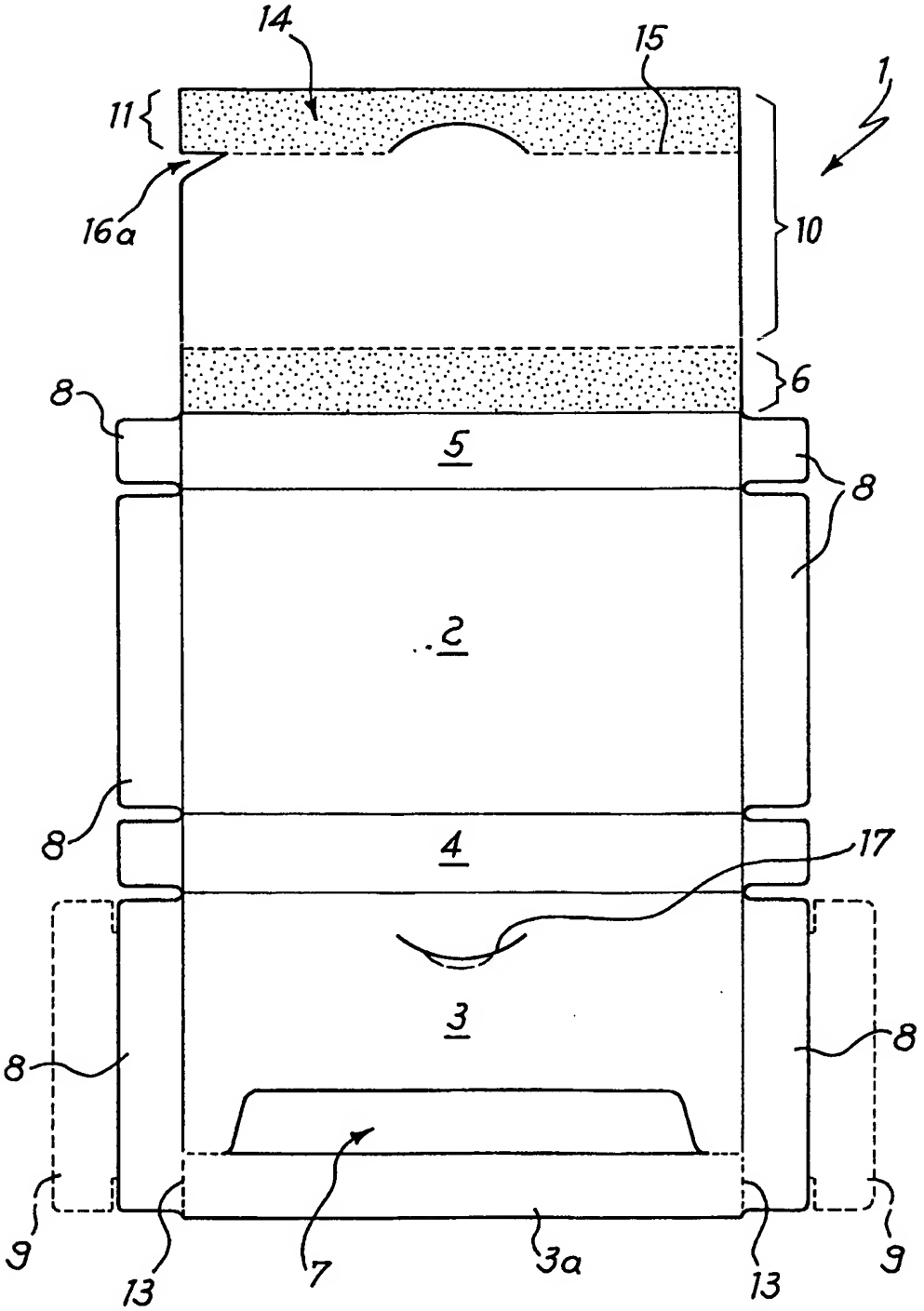


Fig.2

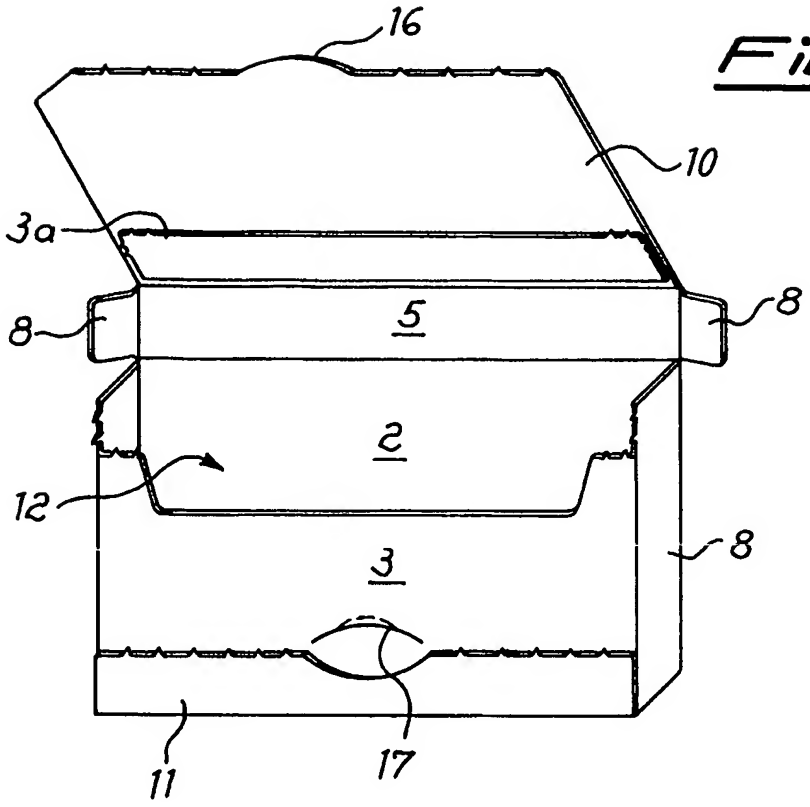


Fig.4

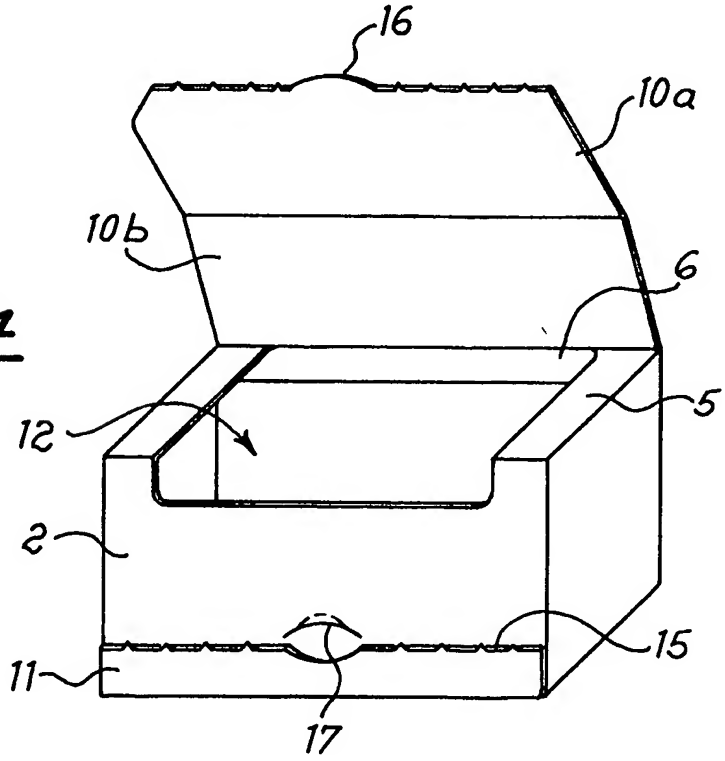


Fig.5

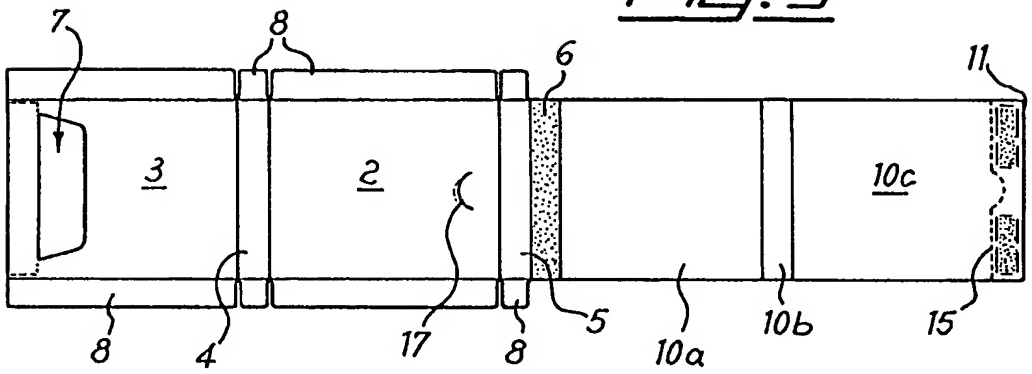
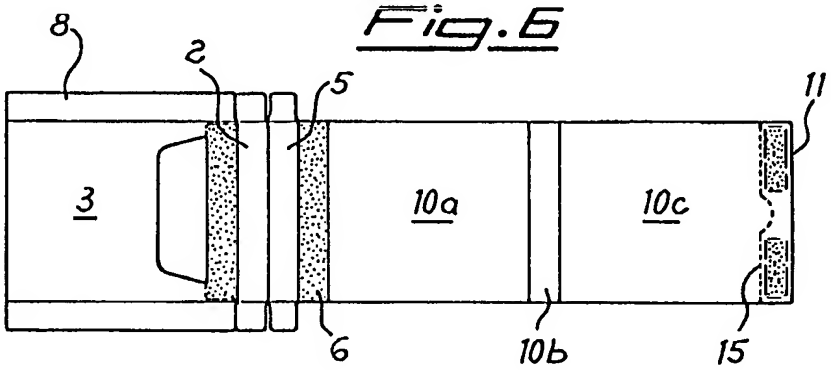


Fig.6



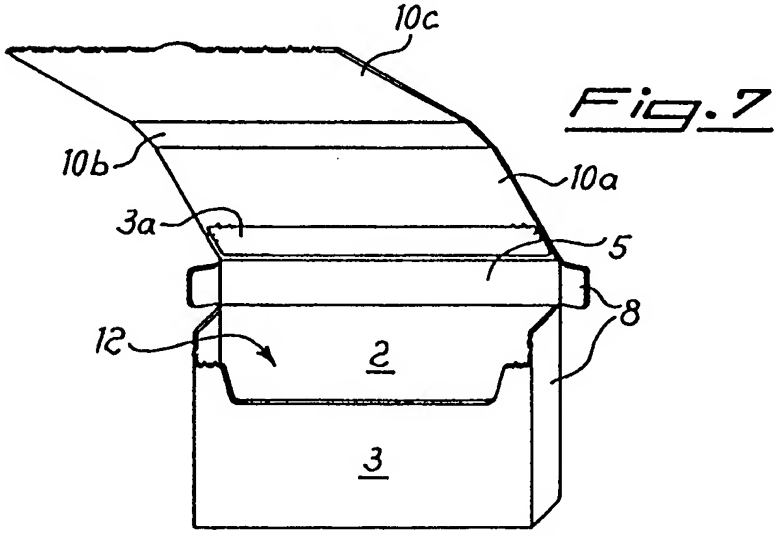
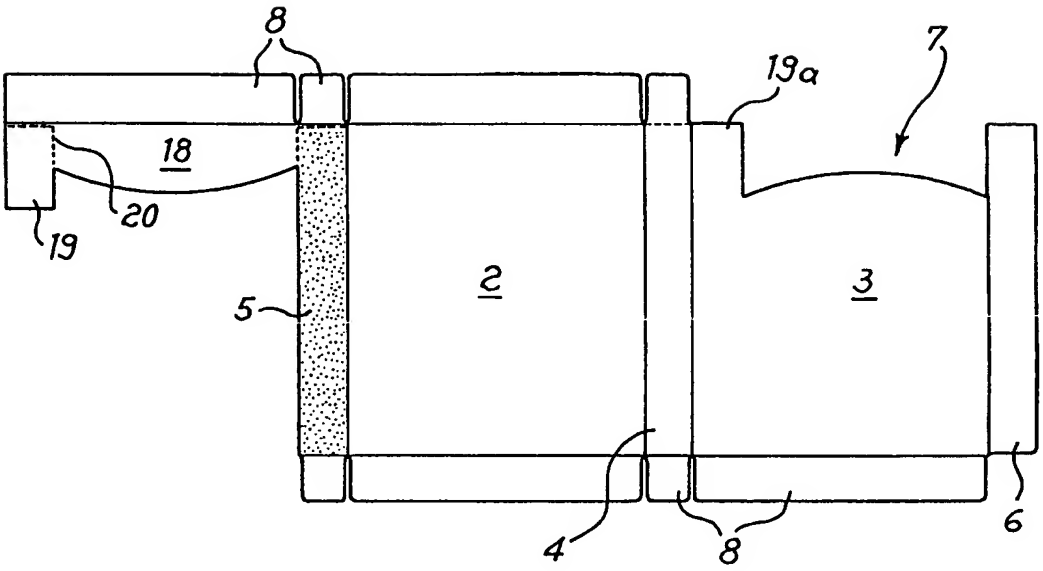


Fig.7

Fig.8



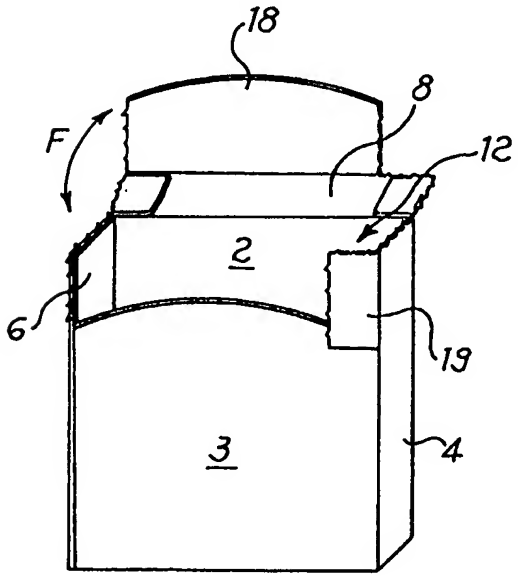


Fig.9

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EUROPEAN SEARCH REPORT

Application Number
EP 94 10 4078

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X Y	US-A-4 997 105 (D. FISCHER) * column 4, line 14 - column 5, line 48; figures 1,2,4 *	1,7,8 2-6,9-12	B65D5/54
Y	US-A-4 284 197 (G. MEYERS) * column 3, line 63 - column 5, line 41; figures 3,4 *	2-5	
Y,D	EP-A-0 430 013 (GRAFICHE EIKON) * column 3, line 17 - column 3, line 47; figures 1-3 *	6,9-12	
A	GB-A-876 149 (RECKITT & SONS) * the whole document *	1-5	
A	US-A-5 123 589 (R. COTE) * the whole document *	1-5	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	27 June 1994	Pernice, C

CATEGORY OF CITED DOCUMENTS

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